

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A ceramic heater comprising;

a ceramic substrate having a work-heating surface which is configured to contact directly with a work to be heated or to face a work to be heated across a space between the work-heating surface and the work to be heated ~~directly face a work to be heated~~; and

a heating element disposed either on or in the ceramic substrate,

wherein the work-heating surface has a JIS B 0601 surface roughness of $R_{\max} = 0.05$ to $200\ \mu\text{m}$.

Claim 2 (Currently Amended): A ceramic heater comprising:

a ceramic substrate having a work-heating surface which is configured to contact directly with a work to be heated or to face a work to be heated across a space between the work-heating surface and the work to be heated ~~directly face a work to be heated~~; and

a heating element disposed either on or in the ceramic substrate,

wherein said ceramic substrate contains an element other than its dominant constituent elements and the work-heating surface has a JIS B 0601 surface roughness of $R_{\max} = 0.2$ to $200\ \mu\text{m}$.

Claim 3 (Previously Presented): The ceramic heater according to Claim 1

wherein said ceramic substrate is at least one member selected from the group consisting of a nitride ceramic, a carbide ceramic and an oxide ceramic.

Claim 4 (Currently Amended): A ceramic heater comprising:

a nitride ceramic substrate having a work-heating surface which is configured to contact directly with a work to be heated or to face a work to be heated across a space between the work-heating surface and the work to be heated ~~directly face a work to be heated~~; and

a heating element disposed either on or in the nitride ceramic substrate,

wherein said nitride ceramic substrate contains an element other than its principal constituent elements and the work-heating surface has a JIS B 0601 surface roughness of $R_{max} = 0.2$ to $200 \mu m$.

Claim 5 (Currently Amended): A ceramic heater comprising:

a nitride ceramic substrate having a work-heating surface which is configured to contact directly with a work to be heated or to face a work to be heated across a space between the work-heating surface and the work to be heated ~~directly face a work to be heated~~; and

a heating element disposed either on or in the nitride ceramic substrate,

wherein said nitride ceramic substrate contains at least one element selected from Na, B, Y, Li, Rb and Ca and the work-heating surface has a JIS B 0601 roughness value of $R_{max} = 0.2$ to $200 \mu m$.

Claim 6 (Canceled).

Claim 7 (Previously Presented): The ceramic heater according to Claim 4

wherein the content of at least one element selected from the group consisting of Y, Li, Rb and Ca is not less than 0.1 weight %.

Claim 8 (Previously Presented): The ceramic heater according to Claim 4 wherein the content of at least one element selected from the group consisting of Na and B is not less than 0.05 ppm.

Claim 9 (Previously Presented): The ceramic heater according to Claim 2, wherein said ceramic substrate is at least one member selected from the group consisting of a nitride ceramic, a carbide ceramic and an oxide ceramic.

Claim 10 (Canceled).

Claim 11 (Previously Presented): The ceramic heater according to Claim 5 wherein the content of at least one element selected from the group consisting of Y, Li, Rb and Ca is not less than 0.1 weight %.

Claim 12 (Previously Presented): The ceramic heater according to Claim 5 wherein the content of at least one element selected from the group consisting of Na and B is not less than 0.05 ppm.

Claim 13 (Previously Presented): The ceramic heater according to Claim 1, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

Claim 14 (Previously Presented): The ceramic heater according to Claim 2, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

Claim 15 (Previously Presented): The ceramic heater according to Claim 4, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

Claim 16 (Previously Presented): The ceramic heater according to Claim 5, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

Claim 17 (Previously Presented): The ceramic heater according to Claim 1, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

Claim 18 (Previously Presented): The ceramic heater according to Claim 2, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

Claim 19 (Previously Presented): The ceramic heater according to Claim 4, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

Claim 20 (Previously Presented): The ceramic heater according to Claim 5, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

Claim 21 (Previously Presented): The ceramic heater according to Claim 1, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

Claim 22 (Previously Presented): The ceramic heater according to Claim 2, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

Claim 23 (Previously Presented): The ceramic heater according to Claim 4, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

Claim 24 (Previously Presented): The ceramic heater according to Claim 5, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

Claims 25-26 (Canceled).

Claim 27 (Previously Presented): The ceramic heater according to Claim 1, wherein the ceramic heater is a heater for heating a semiconductor wafer.

Claim 28 (Previously Presented): The ceramic heater according to Claim 2, wherein the ceramic heater is a heater for heating a semiconductor wafer.